

## ABSTRACT

The present invention provides a firing furnace (100) comprising a combusting means (2) for combusting a fuel (11),  
5 a firing furnace main body (1) for firing a member to be fired and exhausting a combustion gas, and a methane reforming device (3) for reacting a reforming material (23) composed of a methane sub fuel for reformation (21) and steam (22) with a methane reforming catalyst (6) filled therein while heating the same  
10 by the combustion gas for producing a reformed gas (24) containing hydrogen and carbon dioxide, capable of cutting back the fuel cost.